



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

VOL. X.

JANUARY, 1900.

No. 2.

THE MONIST

A NOTE ON THE RELIGIOUS SIGNIFICANCE OF SCIENCE.

NO ONE who has watched thoughtfully the signs of the times can have failed to perceive that modern science both by the introduction of new materials of knowledge and especially by changing our point of view of nature and of human life, is rapidly transforming both our Philosophy and our Religion. The transformation is still going on and far yet from complete; and many fear that there is serious danger of its going too far. I wish to show that these fears are unfounded.

It is a trite remark that tendencies are apt to become fashions of the time, and, like fashions, are apt to run into extremes, and thus provoke reaction. Thus the course of progress of opinion has been likened to a swinging pendulum, which passes from one extreme to another, but with ever decreasing excursions, until it settles on truth. Or, again, to a rising spiral, returning ever upon itself, but gaining a little with each circle. Now, there can be no doubt that the most striking characteristic of modern times is the rapid advance of science, and therefore the most striking modification of the educational system is the increased introduction of scientific subject-matter, scientific ideas, scientific methods. This has led, in the popular mind, to a kind of glorification of science at the expense of other coördinate departments of intellectual pursuits, and has very rightly provoked some reaction among conservative

thinkers. Many thoughtful men are beginning to think that this apotheosis of science has already gone much too far in the popular mind, and therefore is likely to affect injuriously our system of education. Science is not only advancing with dizzying speed, but the scientific spirit and the scientific method are invading every department of thought, and claiming as her own everything in sight. There has arisen, therefore, in the conservative, and especially in the religious, mind a vague dread of the final result, not only on education, but on society itself. This danger-cry has found strong, though temperate and guarded, expression in the admirable address of Prof. Woodrow Wilson, at the sesqui-centennial celebration of Princeton in 1896. Now, I fully sympathise with Professor Wilson's view, and have myself on many occasions spoken as strongly as he; but I see clearly (as he apparently does not) that the cure for this disease, if it be such, must come from science herself. I will, therefore, first put the trouble as strongly as I can and then show the only possible remedy.

Science is so recent and its course so rapid, there is such an accumulation of new material and such a fermenting of new ideas, that there has not yet been time enough for organisation into rational knowledge, which is philosophy. Intellectual food is gathered and ingested so fast that there has been no time for digestion, assimilation and incorporation into our essential human nature. Science is as yet a vast storehouse, a treasury of material, arranged, it is true, in orderly manner according to its own laws, but not yet according to the highest law, not yet brought into harmonic relation with our moral and æsthetic nature, and therefore not yet able to help to guide moral conduct, which is the true end of all knowledge. It must yet be incorporated into our innermost human nature, becoming bone of its bone and flesh of its flesh. It must disappear as mere external possession, and reappear as character and spiritual power, before its real beneficence can be felt. Now, as most people value more what they have than what they are, are vainer of possession than of character, of learning than of culture, it has come to pass that the age has become vain and boastful of scientific progress, and intoxicated with extravagant hopes of the

speedy advent of a society regenerated by science. These optimistic philosophers would, therefore, cut loose entirely from the past. They say: "Let the dead past bury its dead, but follow thou the light of living science." They would destroy utterly, raze to the very ground, the old in religion, in art, and especially in social organisation, and build again all these at once on a new basis and out of new scientific materials, which they themselves undertake to furnish. And these self-styled scientific philosophers and social reformers are so convinced in mind and positive in statement that they are impenetrable to any other view. Verily, we had supposed that dogmatism was the preëmpted right of theology; but if so, then these new scientific philosophers have certainly "jumped the claim."

I have put the case as strongly as I can. Now, the answer:

1. It is evident to the most casual observer that this intoxicating effect of science, with its accompanying vanity, boastfulness, and extravagant hopes, and mad rushing in where angels fear to tread, is not found among true scientific men, but almost wholly among the pseudo-scientific. It is not the legitimate offspring of the true scientific spirit, but is the effect of scientific facts on the unscientific mind. The true scientific spirit is characteristically modest and cautious even in her own domain, much more in that which lies beyond that domain.

2. It is often said that we are now in a transition state between the old and the new, and that transition states are always dangerous. Doubtless increasing knowledge is, indeed, unsettling, and to some weak spirits perhaps dangerous. But there is no other possible cure for this but more and still more knowledge. In this case, at least, the principle "*similia similibus curantur*" holds good. But knowledge is increasing now so rapidly that we shall always hereafter be in a transition state. The only permanent cure, therefore, is to be found in a rational spirit, which recognises and accepts eternal change by evolution as a law. The introduction of new knowledge, especially a great new idea like the law of gravitation or the law of evolution, necessitates a complete readjustment of our whole mental furniture to a new and higher order. But unfortu-

nately, the mental furniture of most persons is so screwed to the floor that it is impossible to readjust without tearing up the whole mental flooring. But let me not be misunderstood. There is also another extreme in this regard. Mental furniture must not be fixed indeed; but neither must it be too movable. It must not be screwed down indeed; but neither must it be set on rollers.

But to return and put it another way: Certain general principles, beliefs, customs, etc., are necessary for effective social activity. But unfortunately these soon harden into an external shell of dogmas and creeds, and, with advancing progress, must be broken and thrown off. They are, first, necessary for activity, then helpful, then protective against dangerous changes, then finally obstructive of growth, and must be cast off. But, alas! society is left for the time in comparatively helpless condition for want of fixed general principles of action. New beliefs, new principles of activity, are soon formed; but again only external to the living spirit. These are speedily hardened again, and must in their turn be broken and cast off, and so on apparently indefinitely. To illustrate: The social organism has heretofore been and is now constructed on the plan of the crustacean. Its skeleton, its instruments of activity, are on the outside, enclosing and protecting all the vital parts. But life is conditioned on continuous growth. In this contest between interior growth and restraining shell, the latter must be broken and cast off, and then we are left in a helpless, soft-crab condition. Soon the crust hardens again into a firm skeleton, and efficient activity is regained, and perhaps more effective than before. But, interior growth continuing, the moulting must be repeated, and with it again the same helpless condition.

And must this go on forever? Must there not come a time when a rational philosophy shall prevail? Shall there not come a time when the social organism shall be constructed on the plan of the vertebrate instead of the crustacean, with the skeleton within, in eternal ethical principles, instead of without, in dogmas and formulas; and the exterior, with its customs, habits, forms of belief, etc., shall be left plastic and yielding to interior growth, sensitive to all external influences, and receptive of all new knowledge?

If so, then from that time forward growth will become steady, and no longer by a succession of catastrophies.

3. I said the final and permanent cure for the evils of society is the advent of a true rational spirit; and this will come with increasing knowledge. Now, nothing, I am convinced, will so contribute to the formation of this rational spirit as the clear and thorough apprehension of the idea of Evolution. The supposed dangers and evils coming from the dominance of the scientific spirit is completely cured by this youngest child of the marriage of Science and Philosophy. I say thorough apprehension, because it is this very idea that is supposed by superficial thinkers and pseudo-scientists to give reasonableness to their revolutionary views. It is this very idea which is most dreaded by ultra-religious conservatives.

I said the evils complained of will be cured by the idea of evolution. Let me explain: Professor Wilson says "science breaks with the past." Evolution, at least, cannot break with the past. She, at least, cannot do without the past. The very definition of evolution is growth—not manufacture; growth of the present out of the past, and of the future out of the present. Evolution, at least, cannot say, "destroy the old, and build again at once out of new materials;" the fundamental principle of evolution is that nothing ever comes in that way. For example: In the geological history of the organic kingdom old forms die and new forms come in. But how? Not created at once out of hand. On the contrary, some old forms die out and leave no progeny; but some are transformed into the higher new, and—mark this—all the new forms come in this way only; i. e., by transformation of the old. The same is true also in the growth of knowledge and in the growth of the social organism. In the evolution of knowledge new ideas and new theories take the place of the old, but not made out of wholly new material. On the contrary, some old ideas die out, and leave not a wrack behind, and some are transformed into the higher new, but all the new come only by modification of the old. In the evolution of society we see the same law. Some forms of social organisation and some institutions die out and leave no progeny, and some are transformed into the higher new. But all the higher new come not by

manufacture out of new material, but only by transformation of the old. Strange that these objectors to science as destructively revolutionary, and especially strange that Professor Wilson, a teacher of history, should not see this. For what is the so-called historic method but the evolution-method imported into the domain of social progress?

In conclusion, I am convinced that nothing so tends to generate a rational spirit—which is the only ground of safety to society—as the idea of evolution. It breaks down all hard and fast lines, and substitutes only gradations. It forbids all sudden creations at once out of the whole cloth, and substitutes only eternal growth. Dogmatism and partisanship cannot live in its presence, for it is the very spirit of tolerance in religion and in politics ; not, indeed, the tolerance of indifference, but that of a true rational spirit. Both art and religion will be transformed by its genial philosophic spirit. When scientific facts and scientific ideas become, not alone an external possession, but assimilated, incorporated, as it were soaked in and made an integral part of our common human nature, then will they be taken hold of by the creative imagination, and there will arise a greater art than ever before. When beliefs and principles of action are vivified by reason, and become a common heritage of humanity, then shall we all rise to a higher plane of religious thought than ever before. Science has come, not to destroy, but to fulfil and verify all that is best and truest in our faiths and aspirations, and thus to purify and ennable both art and religion.

JOSEPH LE CONTE.

University of California.